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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/518,697	03/03/2000	Robert Bruce Wakelam	28207.3	7129
27683	7590	02/17/2004	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			JONES, HUGH M	
			ART UNIT	PAPER NUMBER
			2128	
DATE MAILED: 02/17/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Application No.	Applicant(s)
	09/518,697	WAKELAM ET AL.
	Examiner	Art Unit
	Hugh Jones	2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 3/3/2000.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10, 12, 15-38, 41 and 42 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10, 12, 15-38, 41-42 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 03 March 2000 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4, 6</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. Claims 1-10, 12, 15-38, 41-42 of U. S. Application 09/518,697, filed March 3, 2000, are pending.

Information Disclosure Statement

2. The information disclosure statement filed 6/20/2000 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because items AO-AR and BO-BR are not dated. It has been placed in the application file, but the items AO-AR and BO-BR referred to therein have not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Drawings

3. The drawings are objected to because there are a number of new drawings (for example, drawings 2j-2k which are not mentioned in the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC 101

4. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 15-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6. Claims 15-27 mix statutory classes. Claim 15 is a computer program product claim that also recites an apparatus limitation. A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a process nor a machine, but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

Claim Rejections - 35 USC 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1-10, 12, 15-38, 41-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

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- Claims 15-27: The claims mix statutory classes. See, for example, claim 15. Claim 15 is a computer program product claim that also recites an apparatus" limitation. A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a process, nor a machine, but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

Since the apparatus limitation does not further limit the claim(s), it has not been considered.

- all Claims: the claims are replete with multiple transitional phrases making it difficult to determine where the preambles begin and end. See claim 4, for example. Claim 4 first limits parametric objects and then limits the system.

- Claim 23: Claim 23 recites "wherein each of the massing elements comprises" in the preamble. There is insufficient antecedent basis for this limitation in the claim.

- Claims 1-10, 12, 28-38, 41-42: recite "accurately" as in accurately assemble. This phrase is ambiguous. The term "accurately" in the claims appears to be a relative term which renders the claim indefinite. The term "accurately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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- **Claims 12, 25, 38:** the claims recite saving results in the form of a graph. It is not clear what information is to be displayed in the graph. The results appear to be directed at information required for the assembly of the structure. It is not clear how this can be displayed in graphical form.

Claim Interpretation

9. The broadest reasonable interpretation has been given to the claims. The recitation of saving the results in the form of a “graph” is ambiguous. It is interpreted that this refers to saving results as lists of parts data. Clarification is requested.

Claim Rejections - 35 USC 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

11. A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. **Claims 1, 12, 15-17, 22, 24-25, 27-28, 35 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Saxton et al..**

Saxton (U. S. Patent 5,197,120) discloses a method for generating a parametric design on a computer without the use of a programming language. A drawing processor is used to create a master drawing from which other drawings of different dimensions can then be synthesized by modification of the master drawing. Instead of each dimension in the master drawing being given a fixed value, it is given a label. These labels are replaced at run time by dimensions the user

provides or dimensions which are calculated as described in a design plan. When the program is run, the system uses simple language to prompt the user for each design value. It incorporates the response with data previously entered into the design plan. If a response is unclear, a request is made for clarification. As a draftman would do, the invention merges the design values with data from both the design plan and the master drawing to create a finished drawing. In executing a parametric design, the user selects the controlling design plan to be used as a basis of the design. Acting on information contained therein, other design plans may be loaded and executed automatically. As a result, images of associated master drawings are modified and/or combined to represent the design. The final design is represented by electronically stored data which can be utilized to create a visual display such as a drawing and/or directly to manufacture a part, structure, etc.

In particular, Saxton discloses design of a building (all figures); parametric design (line 17, col. 11 to col. 12; line 41, col. 52 to line 60, col. 54; fig. 50-59); editing a parametric design (line 61, col. 54 to lines 9., col. 56; fig. 50-59); display of the design (fig. 50-59).

Claim Rejections - 35 USC 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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14. The factual inquiries set forth in *Graham v. John Deere Co.*, 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

15. **Claims 1-3, 12, 15-17, 22, 24-25, 27-30, 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. or Krishnan et al. in view of Saxton et al.**

Li et al. disclose a parametric object-oriented CAD/CAPP/CAM system. See section II – III and figures 2-3.

Krishnan et al. disclose a parametric, object-oriented modeling system. In particular, note col. 1, page 162 and discussion regarding parameterization and instances.

Neither Li et al. nor Krishnan et al. *expressly* disclose that the intended use for the Cad system is for a building structure.

Saxton (U. S. Patent 5,197,120) discloses a method for generating a parametric design on a computer without the use of a programming language. A drawing processor is used to create a master drawing from which other drawings of different dimensions can then be synthesized by modification of the master drawing. Instead of each dimension in the master drawing being given a fixed value, it is given a label. These labels are replaced at run time by dimensions the user provides or dimensions which are calculated as described in a design plan. When the program is run, the system uses simple language to prompt the user for each design value. It incorporates the

response with data previously entered into the design plan. If a response is unclear, a request is made for clarification. As a draftman would do, the invention merges the design values with data from both the design plan and the master drawing to create a finished drawing. In executing a parametric design, the user selects the controlling design plan to be used as a basis of the design. Acting on information contained therein, other design plans may be loaded and executed automatically. As a result, images of associated master drawings are modified and/or combined to represent the design. The final design is represented by electronically stored data which can be utilized to create a visual display such as a drawing and/or directly to manufacture a part, structure, etc.

In particular, Saxton discloses design of a building (all figures); parametric design (line 17, col. 11 to col. 12; line 41, col. 52 to line 60, col. 54; fig. 50-59); editing a parametric design (line 61, col. 54 to lines 9, col. 56; fig. 50-59); display of the design (fig. 50-59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to extend the teachings of the cited art to expressly include buildings because Saxton et al. discloses uses parametric CAD design for buildings.

16. Claims 4-5, 18-19, 31-32, 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. or Krishnan et al. in view of Saxton et al. or Burns et al.

Li et al. or Krishnan et al. in view of Saxton et al. disclose all intervening limitations as discussed, but do not expressly disclose costing and scheduling.

Isherwood discloses a system for estimating construction project costs and schedules. See fig. 2-5.

Burns et al. disclose a system for estimating construction project costs and schedules.

See: col. 1, lines 19-25; col. 4, lines 10-23; col. 8, line 55 to col. 9, line 20; col. 10, lines 13-54; col. 20, lines 21-39.

It would have been obvious to one of ordinary skill in the art at the time of the invention to extend the teachings of the cited art to expressly include the teaching of costing and scheduling because (Isherwood: col. 1, lines 6-10; Burns et al.: col. 3, lines 7-26) the flow of projects would be improved with the simplicity and reliability of estimating time, scheduling and costs, which are essential in the construction industry.

17. Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. or Krishnan et al. in view of Saxton et al. or Burns et al., and in further view of Cornwell .

(Li et al. or Krishnan et al.) in view of (Saxton et al. and Isherwood) disclose all intervening limitations as discussed, but do not expressly disclose orientational plan views.

Cornwell discloses a system for estimating construction project costs and schedules for cabinets. Cornwell further discloses plan views.

It would have been obvious to one of ordinary skill in the art at the time of the invention to extend the teachings of the cited art to expressly include the teaching of plan views because previews of proposed construction layouts would give customers the opportunity to see the proposed construction and select a preferred orientation. It is inherent that construction costs would be affected by changes in construction plans.

Allowable Subject Matter

17. Claims 6-10, 20-21, 23, 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims – and assuming all other rejections/objections are traversed.

Response to Arguments

18. Applicant's arguments filed 7/10/2002 have been fully considered but they are not persuasive.

Applicants do not address any specifics in Saxton, but instead merely provide commentary that geometric parameters alone are not sufficient for assembly of a complete building model. In any case, such arguments are moot because Applicants have amended the claims.

19. Any inquiry concerning this communication or earlier communications from the examiner should be:

directed to:

Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to 0700 ET,
or the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

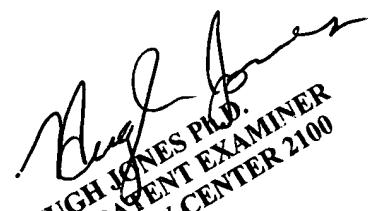
(703) 308-9051 (for formal communications intended for entry)

or (703) 308-1396 (for informal or draft communications, please label *PROPOSED* or *DRAFT*).

Dr. Hugh Jones

Primary Patent Examiner

January 28, 2004



HUGH JONES PH.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100